

Mathematical Reflections

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In this investigation, you arranged cubes in the shape of rectangular prisms, and you also found the arrangements with the least and greatest surface area. You developed methods for finding surface area and volume. These questions will help you summarize what you have learned.

Think about your answers to these questions. Discuss your ideas with other students and your teacher. Then write a summary of your findings in your notebook.

1. For a given number of cubes, what arrangement will give a rectangular prism with the least surface area? What arrangement will give a rectangular prism with the greatest surface area? Use specific examples to illustrate your ideas.
2. Describe how you can find the surface area of a rectangular prism. Give a rule for finding the surface area.
3. Describe how you can find the volume of any prism. Give a rule for finding the volume.